



DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. NHTSA-2018-0078]

Reports, Forms, and Record Keeping Requirements

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Notice.

SUMMARY: The National Highway Traffic Safety Administration (NHTSA) is announcing an opportunity for public comment on the proposed collection of certain information by the Agency. Under the Paperwork Reduction Act of 1995 (the PRA), Federal Agencies are required to publish a notice in the Federal Register concerning each proposed collection of information and to allow 60 days for public comment in response to the notice. This notice solicits comments on an information collection supporting the development of improved child-size crash test dummies.

DATES: Comments must be received on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may submit comments using any of the following methods. All comments must have the applicable DOT docket number noted conspicuously on them.

Electronic submissions: Go to <http://www.regulations.gov>. Follow the online instructions for submitting comments.

Mail: Docket Management Facility, M-30, U.S. Department of Transportation, West Building, Ground Floor, 1200 New Jersey Ave., SE, Room W12-140, Washington, DC, 20590.

Hand Delivery: West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE. Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Fax: (202) 493–2251.

Instructions: Each submission must include the Agency name and the Docket number for this Notice. Note that all comments received will be posted without changes to <http://www.regulations.gov> including any personal information provided.

FOR FURTHER INFORMATION CONTACT:

Jason Stammen, Ph.D., Applied Biomechanics Division, Vehicle Research and Test Center, NHTSA, 10820 State Route 347—Bldg. 60, East Liberty, Ohio 43319; Telephone (937) 666-4511; Facsimile: (937) 666-3590; e-mail address: jason.stammen@dot.gov.

SUPPLEMENTARY INFORMATION: Under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520), before an agency submits a proposed collection of information to OMB for approval, it must first publish a document in the Federal Register providing a 60-day comment period and otherwise consult with members of the public and affected agencies concerning each proposed collection of information. The OMB has promulgated regulations describing what must be included in such a document. Under OMB’s regulation (at 5 CFR 1320.8(d), an agency must ask for public comment on the following:

- (i) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;
- (ii) the accuracy of the agency’s estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
- (iii) how to enhance the quality, utility, and clarity of the information to be collected;
- (iv) how to minimize the burden of the collection of information on those who are to respond, including the use of appropriate automated, electronic, mechanical, or other

technological collection techniques or other forms of information technology, e.g. permitting electronic submission of responses. In compliance with these requirements, NHTSA asks for public comments on the following proposed collection of information:

Title: Pediatric Shoulder Response in Frontal Loading

Type of Request: New collection.

OMB Clearance Number: None.

Requested Expiration Date of Approval: Three years from date of approval.

Summary of the Collection of Information:

NHTSA proposes to collect information from the public to support the development of design criteria for the mobility of the shoulder of a new child-size crash test dummy. Minors age 8-12 will participate after informed consent of the parent/guardian is received. After researchers measure the participant's anthropometry (height, weight, shoulder landmarks, etc.), the participant will undergo a fun, low-intensity exercise activity under the direction of the researchers while the parent/guardian observes. The activity will involve motion of the participant's shoulder while resisting forces are collected. The data from all participants will then be compiled to develop design criteria for the crash test dummy shoulder.

Description of the Need for the Information and Proposed Use of the Information:

In the early 2000's, NHTSA evaluated the Hybrid III 10-year-old child dummy. While this dummy was deemed adequate for the evaluation of large child restraints and eventually federalized in 2012, one of the shortcomings NHTSA identified of the child dummy is a shoulder that has very little mobility with no interaction with the ribcage. In 2011, the NHTSA Vehicle Research & Test Center Applied Biomechanics Division initiated a research program to develop a new crash dummy representing a large child with improved biofidelity called the Large

Omnidirectional Child (LODC) dummy. NHTSA used pediatric biomechanical information from literature to guide the design of the LODC prototype. However, there was very little biomechanical information on the response of the pediatric shoulder. As the shoulder is a very important structure of the body for managing interaction of the restraint and body in a motor vehicle crash, new biomechanical data is needed to guide the design of the LODC shoulder.

Historically, child dummy component responses have simply been scaled from adult post-mortem surrogate tests. However, there is a large body of research that has demonstrated that children are not simply small adults when it comes to behavior in a high-speed crash scenario. Developmental anatomy must be considered in addition to mass and anthropometry in the creation of design targets for child dummies.

Because testing of pediatric post-mortem surrogates raises ethical concerns, researchers are compelled to find creative ways to gather biomechanical information from living children. The historical approach for obtaining body region response information is to design a fun, low-intensity activity or game where the participant movement is captured in some manner while resisting forces are collected. The forces generated with respect to the movements are used to develop a “response target” that serves as design guidance for the relevant crash dummy component.

Respondents: We estimate that 24 persons will complete the information collection.

Respondents will be parents of children age 8-12.

Estimated Number of Respondents: In support of this research, it is estimated that 24 children age 8-12 will complete the activity while the parent observes.

Estimated Time per Response: The child and parent will be required to spend roughly 1 hour in the laboratory to complete the required steps associated with the activity.

Total Estimated Annual Burden: 24 hours, or 1 hour per participant

Frequency of Collection: The data collection described will be performed once to obtain the target number of valid test participants.

Authority: 44 U.S.C. Section 3506(c)(2)(A).

Nathaniel Beuse,

Associate Administrator,

Office of Vehicle Safety Research.

Billing Code 4910-59-P